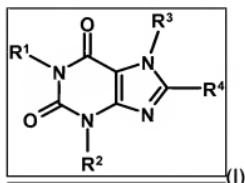


IN THE CLAIMS

1–4. (canceled)

5. (currently amended) **A compound of formula (I)**



The compound of general formula (I) according to claim 4, wherein:

R¹ is a [2-(cyclopropylcarbonylamino)phenyl]carbonylmethyl or [2-(pyridylcarbonylamino)phenyl]carbonylmethyl group;

R² is a methyl group;

R³ is a 2-buten-1-yl, 3-methyl-2-buten-1-yl, or a 2-butyn-1-yl group; and

R⁴ is a (3-aminopiperidin-1-yl) group,

or a prodrug or salt thereof.

6. (currently amended) A compound selected from:

(1)(1) [2-(2-formylaminophenyl)-2-oxoethyl]-3-methyl-7-(3-methyl-2-butene-1-yl)-8-(3-aminopiperidin-1-yl)xanthine;

(1)(2) 1-(2-{2-[(cyclopropylcarbonyl)amino]phenyl}-2-oxoethyl)-3-methyl-7-(3-methyl-2-butene-1-yl)-8-(3-aminopiperidin-1-yl)xanthine;

(3) —— 1-[2-(2-formylaminophenyl)-2-oxoethyl]-3-methyl-7-(2-butyn-1-yl)-8-(3-aminopiperidin-1-yl)xanthine;

(2)(4) 1-(2-{2-[(cyclopropylcarbonyl)amino]phenyl}-2-oxoethyl)-3-methyl-7-((E)-2-butene-1-yl)-8-((R)-3-aminopiperidin-1-yl)xanthine;

(3)(5) 1-(2-{2-[(cyclopropylcarbonyl)amino]phenyl}-2-oxoethyl)-3-methyl-7-((E)-2-butene-1-yl)-8-((S)-3-aminopiperidin-1-yl)xanthine;

(4)(6) 1-(2-{2-[(cyclopropylcarbonyl)amino]phenyl}-2-oxoethyl)-3-methyl-7-(2-butyn-1-yl)-8-((R)-3-aminopiperidin-1-yl)xanthine;

(5)(7) 1-(2-{2-[(cyclopropylcarbonyl)amino]phenyl}-2-oxoethyl)-3-methyl-7-(2-butyn-1-yl)-8-((S)-3-aminopiperidin-1-yl)xanthine; and

(6)(8) 1-[2-(2-{[(pyridin-2-yl)carbonyl]amino}phenyl)-2-oxoethyl]-3-methyl-7-((E)-2-buten-1-yl)-8-(3-aminopiperidin-1-yl)xanthine,

or a prodrug or salt thereof.

7-10. (canceled)

11. (original) The compound of formula (I) according to claim 5, wherein the compound is a physiologically acceptable salt.

12. (currently amended) The compound of formula (I) according to claim 6, wherein the compound is a physiologically acceptable salt.

13. (currently amended) A pharmaceutical composition comprising a compound of formula (I) according to claim 5 one of claims 1 to 12 and an inert carrier or diluent.

14. (currently amended) The pharmaceutical composition according to claim 13, wherein the compound of formula (I) is incorporated with the inert carrier or diluent by a non-chemical method.

15. (currently amended) A method of treating type I and type II diabetes mellitus, obesity, or calcitonin-induced osteoporosis comprising administering to the

a patient in need thereof a pharmaceutically effective amount of a compound of formula (1) according to claim 5 or 6 one of claims 1 to 12 for the prevention or treatment of a disease or a condition selected from the group consisting of: type 1 and type 2 diabetes mellitus, rheumatoid arthritis, obesity, allograft transplantation and calcitonin-induced osteoporosis.

16. (new) A method of treating type I or type II diabetes mellitus, or obesity, comprising administering to a patient in need thereof a pharmaceutically effective amount of a compound according to claim 5 or 6.

17. (new) A method of treating or preventing type II diabetes mellitus or obesity, comprising administering to a patient in need thereof a pharmaceutically effective amount of a compound according to claim 5 or 6.

18. (new) A pharmaceutical composition comprising a compound according to claim 6 and an inert carrier or diluent.

19. (new) The pharmaceutical composition according to claim 18, wherein the compound is incorporated with the inert carrier or diluent by a non-chemical method.